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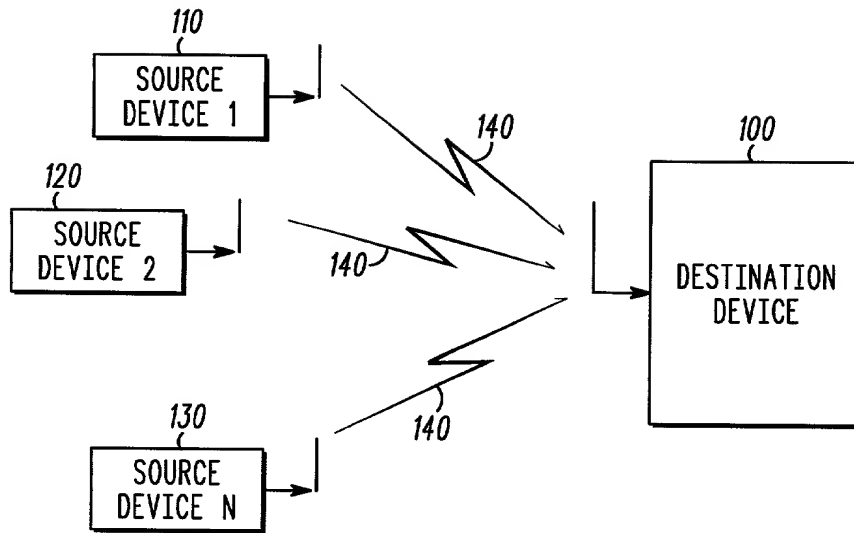


FIG. 1

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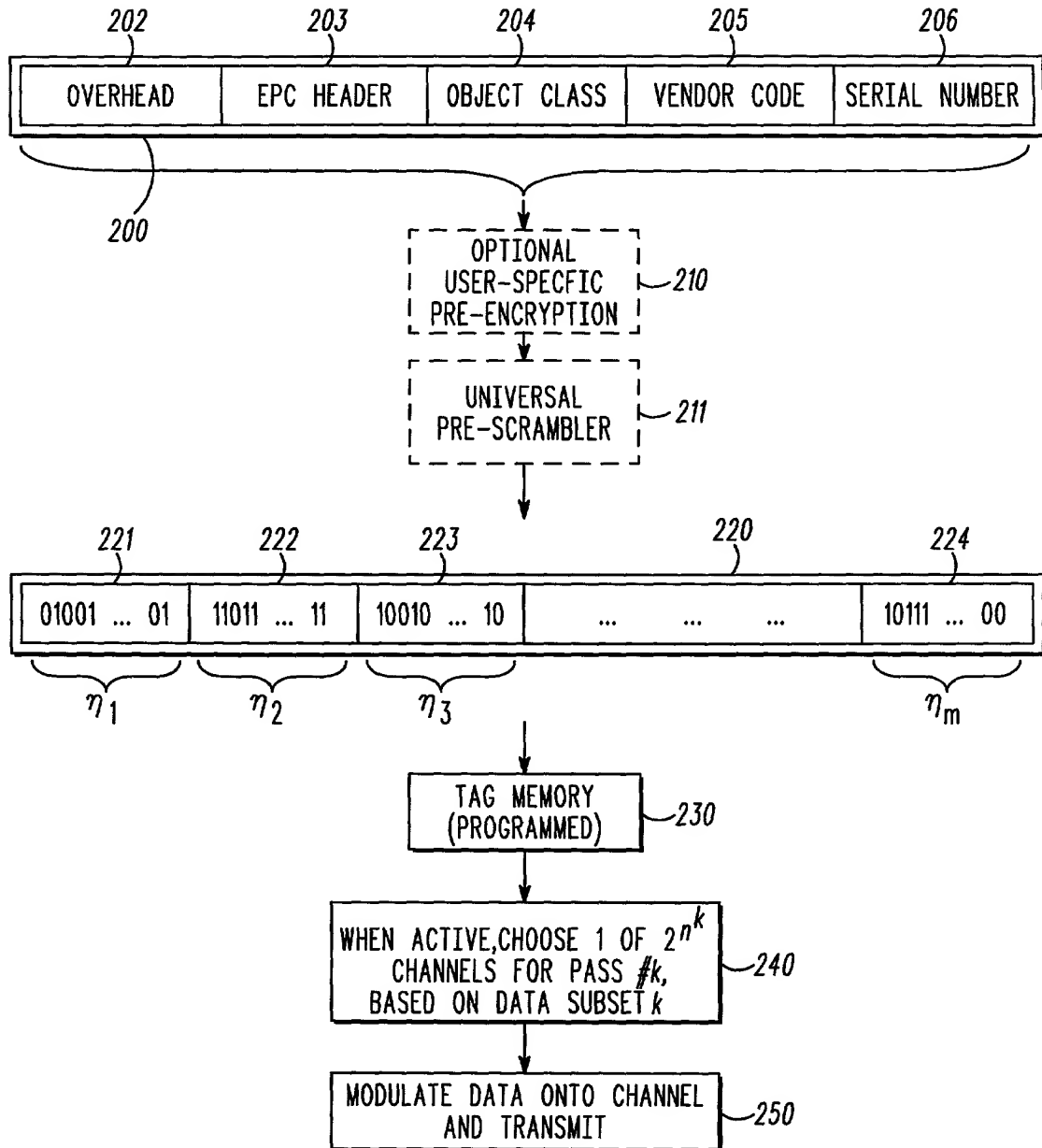


FIG. 2

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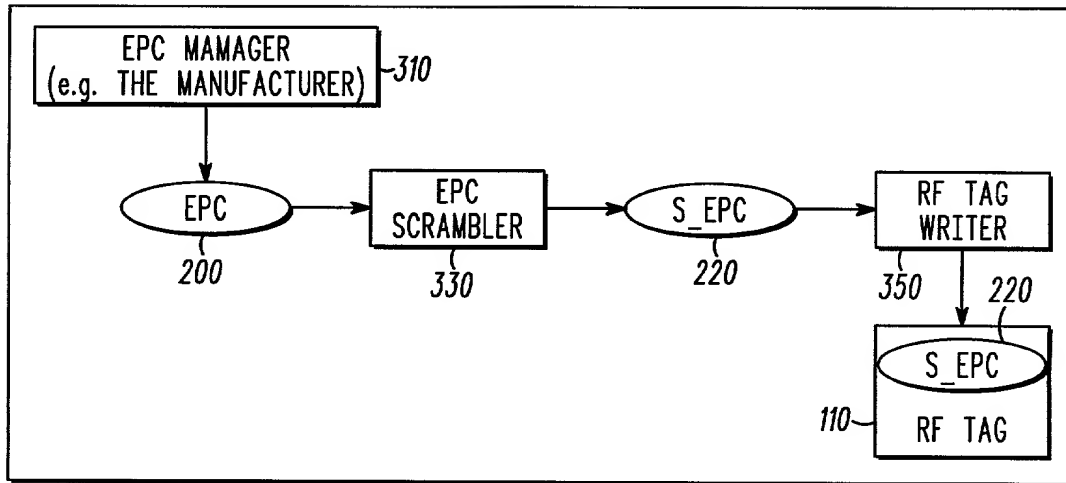


FIG. 3

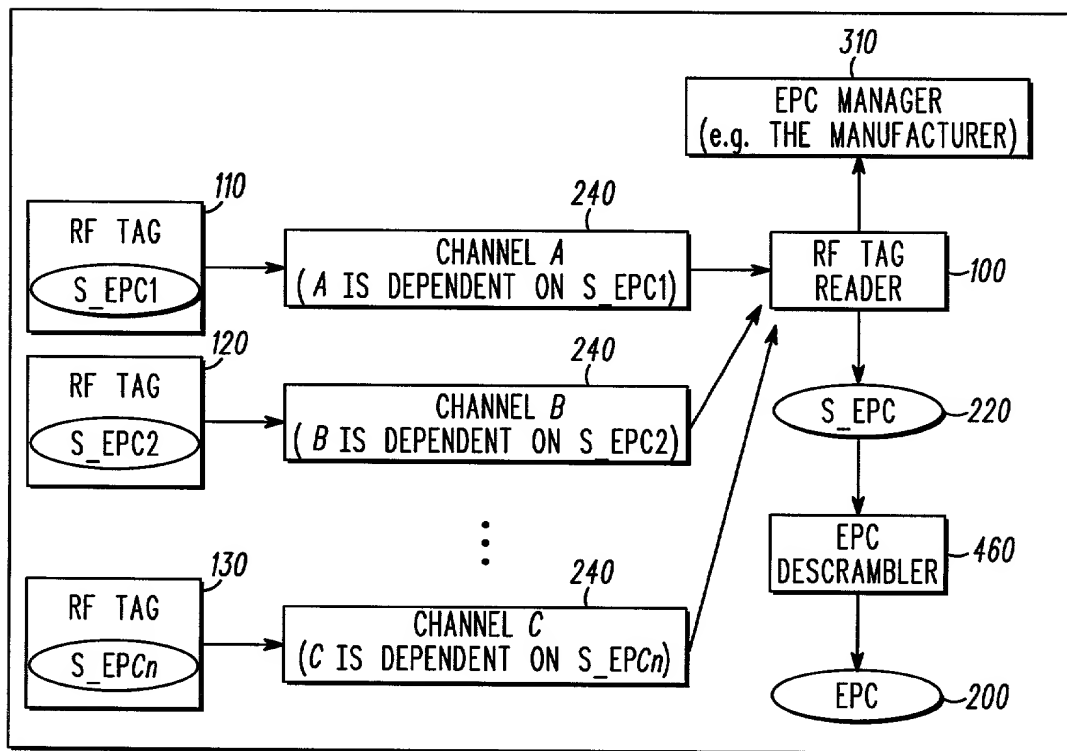


FIG. 4

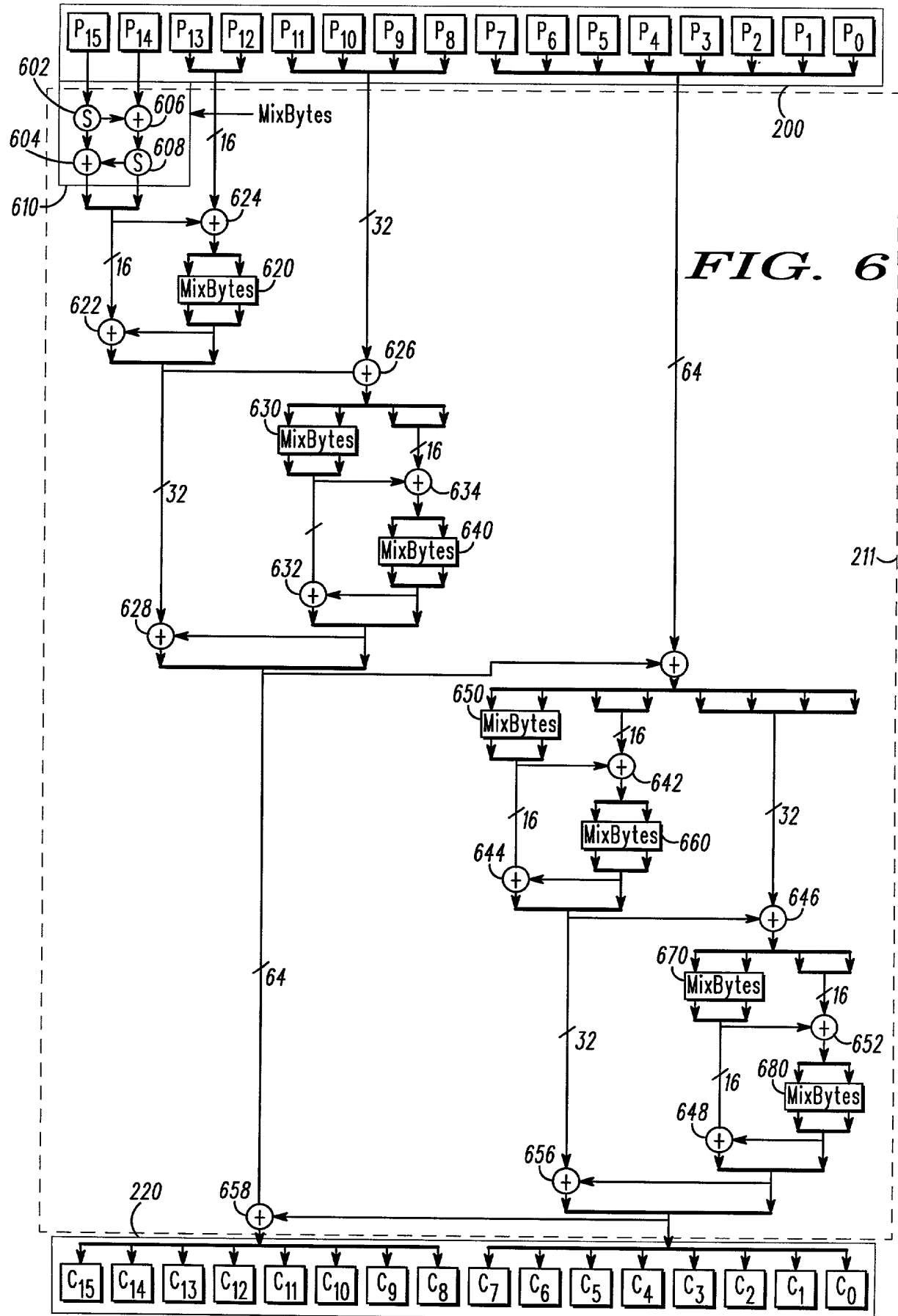
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510 SCRAMBLE (DATA, LENGTH) {
 IF (LENGTH == 1)
 RETURN (Sbox [DATA]) ;
 DATA. LEFT = SCRAMBLE (DATA. LEFT, LENGTH/2) ;
 DATA. RIGHT ^= DATA LEFT ;
 DATA. RIGHT = SCRAMBLE (DATA. RIGHT, LENGTH/2) ;
 DATA. LEFT ^=DATA. RIGHT ;
}

520 DESCRAMBLE (DATA, LENGTH) {
 IF (LENGTH == 1)
 RETURN (INVERSE_Sbox [DATA]) ;
 DATA. LEFT ^=DATA. RIGHT ;
 DATA. RIGHT = DESCRAMBLE (DATA. RIGHT, LENGTH/2) ;
 DATA. RIGHT ^= DATA. LEFT ;
 DATA. LEFT = DESCRAMBLE (DATA. LEFT, LENGTH/2) ;
}

FIG. 5

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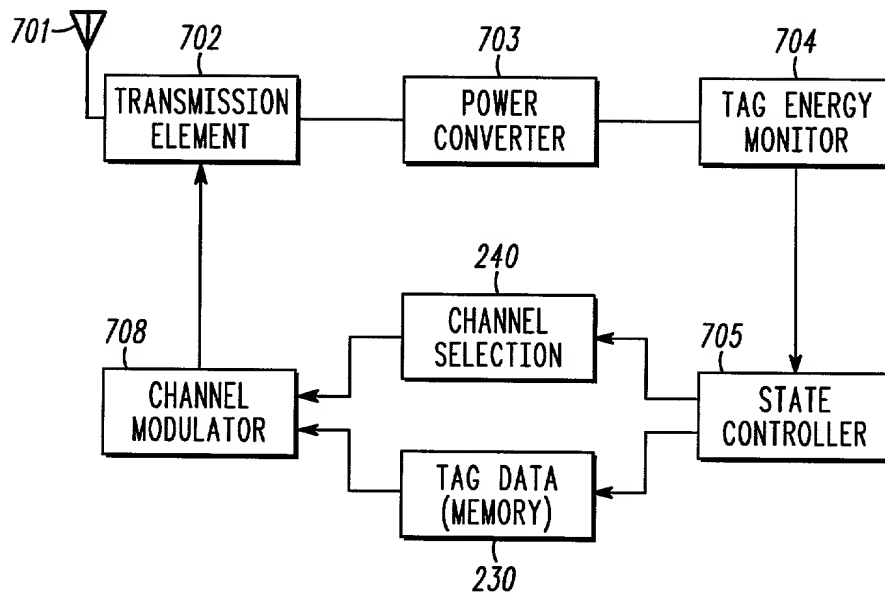


FIG. 7

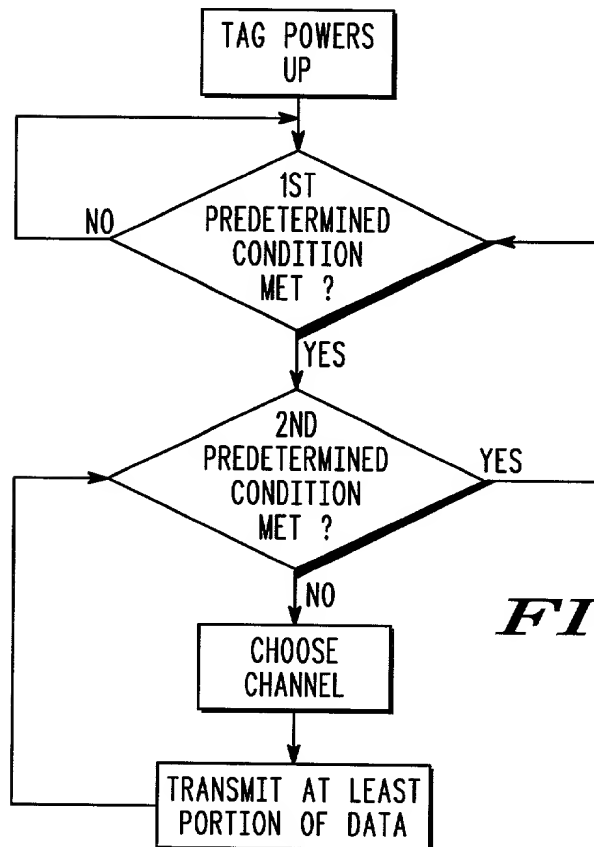


FIG. 8

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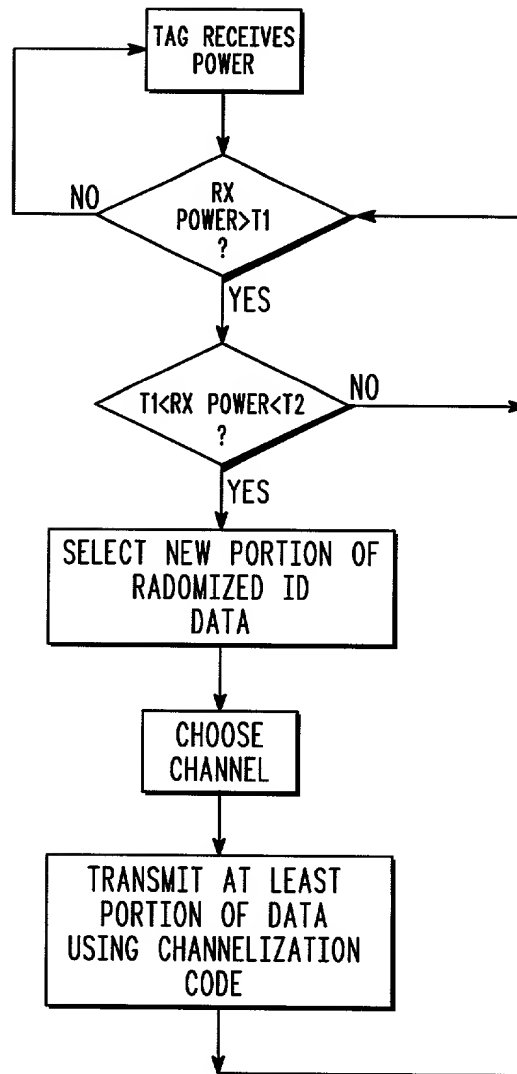


FIG. 9

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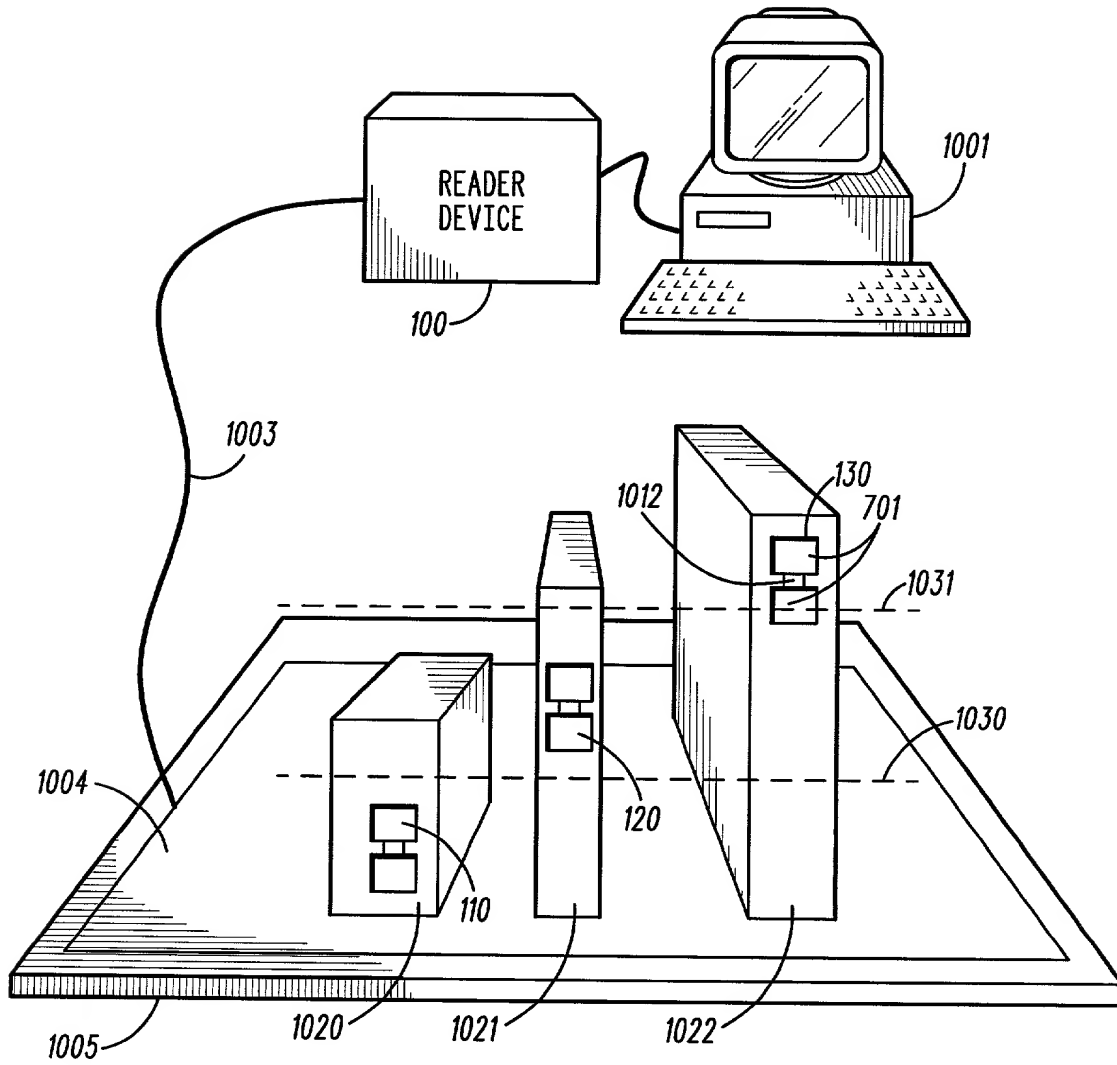
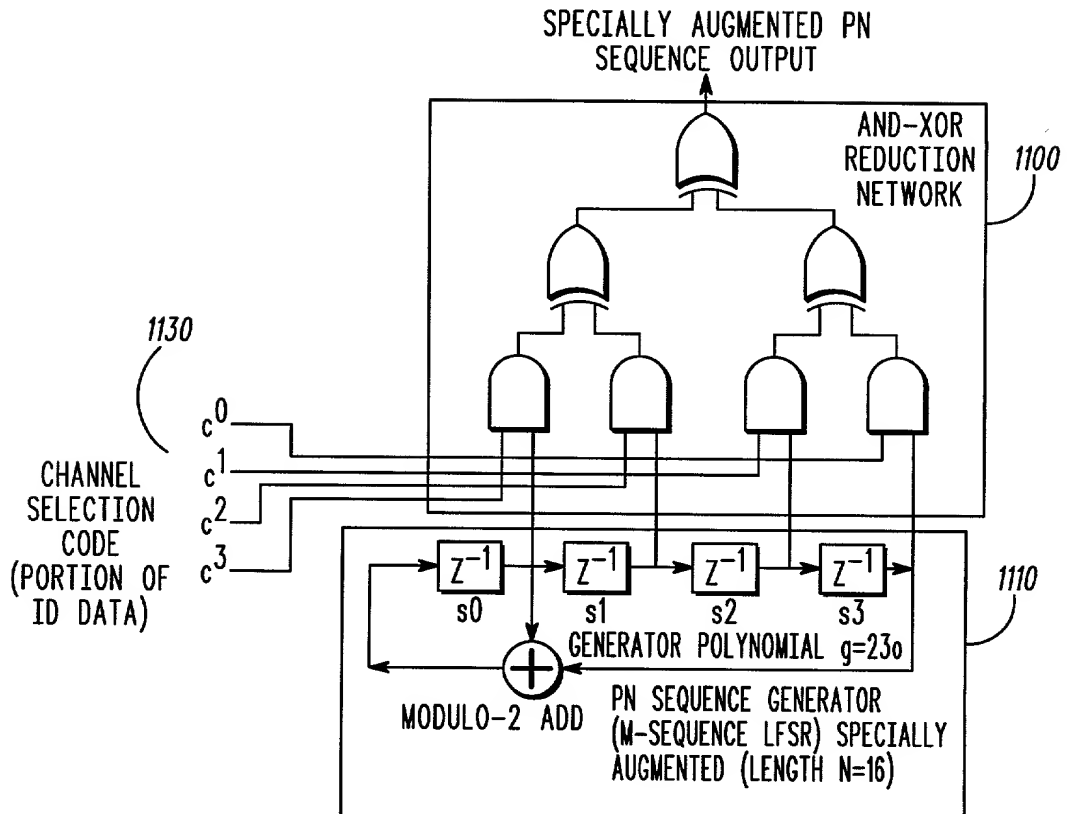


FIG. 10

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LFSR STATE TABLE

CLOCK CYCLE	s_0	s_1	s_2	s_3	DEC. STATE
0 (ZERO OUT)	1	1	1	1	15
1 (HELD)	1	1	1	1	15
2	0	1	1	1	7
3	1	0	1	1	11
4	0	1	0	1	5
5	1	0	1	0	10
6	1	1	0	1	13
7	0	1	1	0	6
8	0	0	1	1	3
9	1	0	0	1	9
10	0	1	0	0	4
11	0	0	1	0	2
12	0	0	0	1	1
13	1	0	0	0	8
14	1	1	0	0	12
15	1	1	1	0	14

FIG. 11

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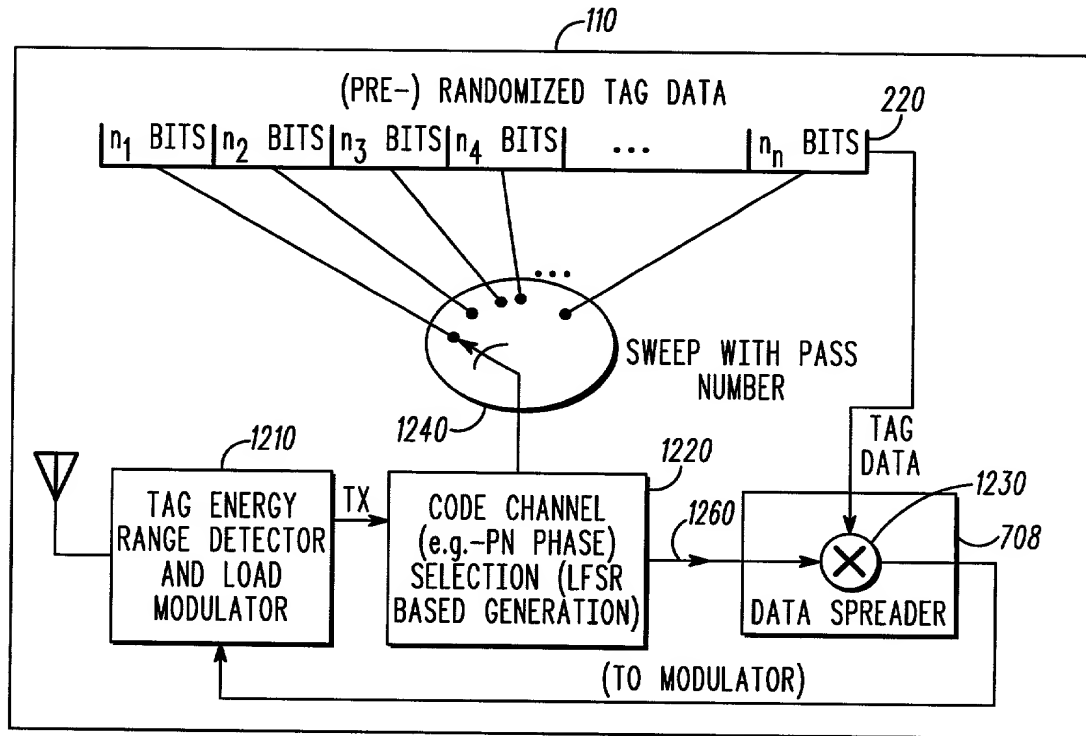


FIG. 12

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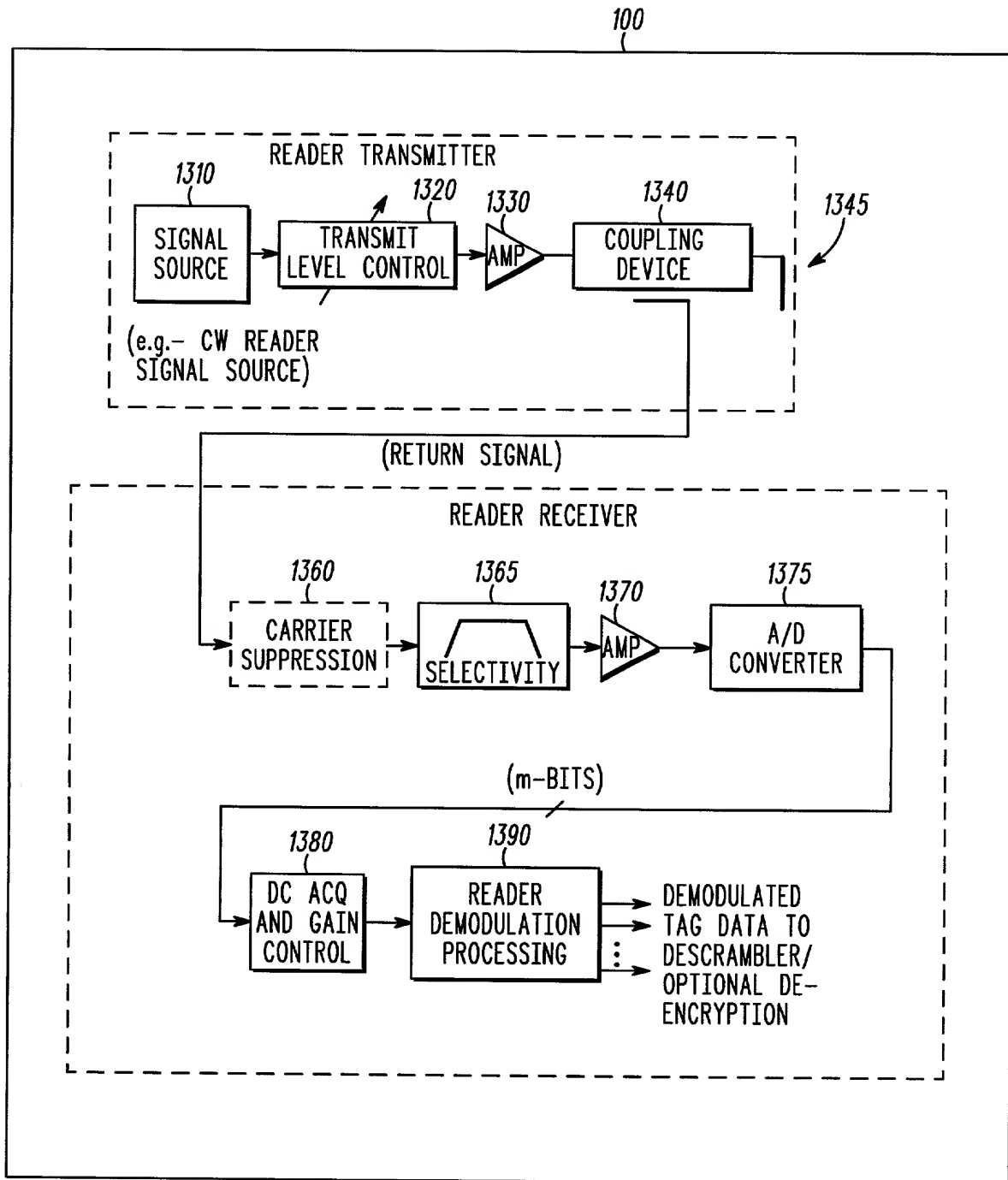
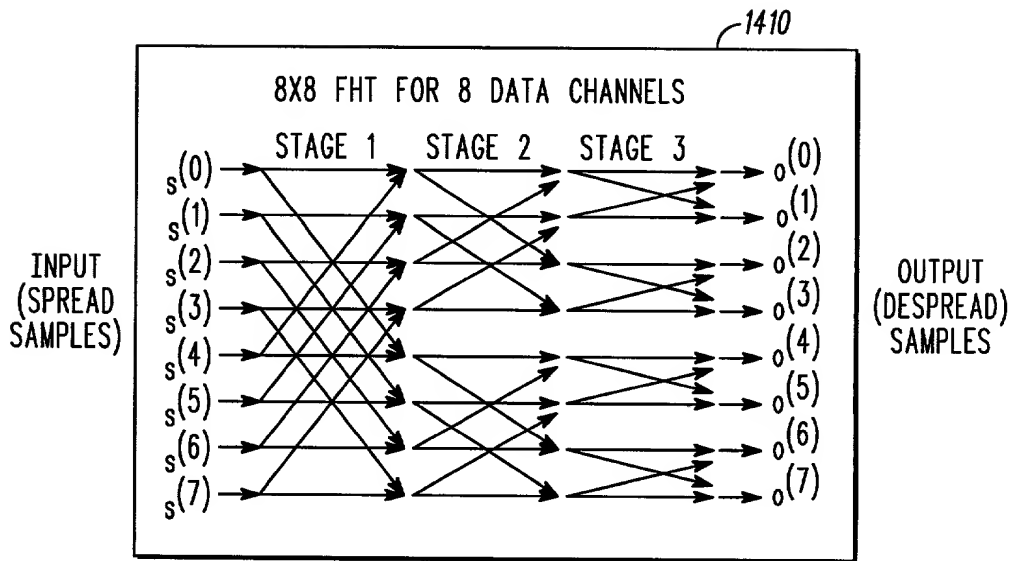
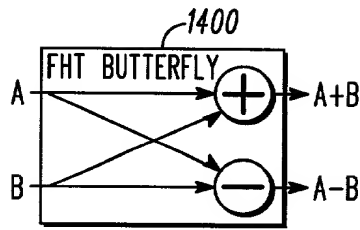


FIG. 13

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WALSH CODE (0)=	0	0	0	0	0	0	0	0
WALSH CODE (1)=	0	1	0	1	0	1	0	1
WALSH CODE (2)=	0	0	1	1	0	0	1	1
WALSH CODE (3)=	0	1	1	0	0	1	1	0
WALSH CODE (4)=	0	0	0	0	1	1	1	1
WALSH CODE (5)=	0	1	0	1	1	0	1	0
WALSH CODE (6)=	0	0	1	1	1	1	0	0
WALSH CODE (7)=	0	1	1	0	1	0	0	1

8 WALSH CODES (e.g., ROWS OF H_3 HADAMARD MATRIX)

$$(H_{n+1} = \begin{bmatrix} H_n & H_n \\ H_n & \overline{H_n} \end{bmatrix}, H_0 = 0)$$

FIG. 14

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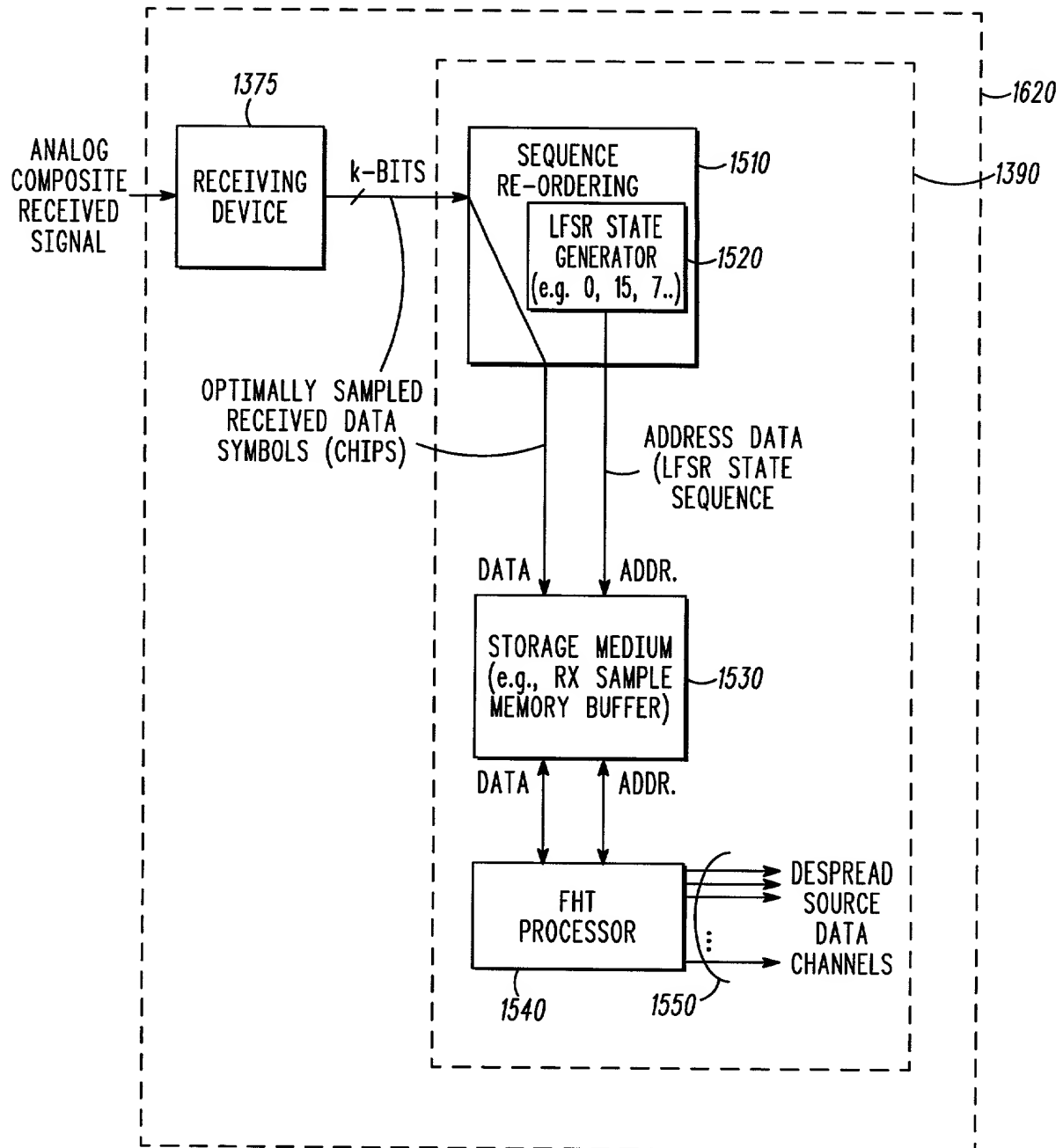


FIG. 15

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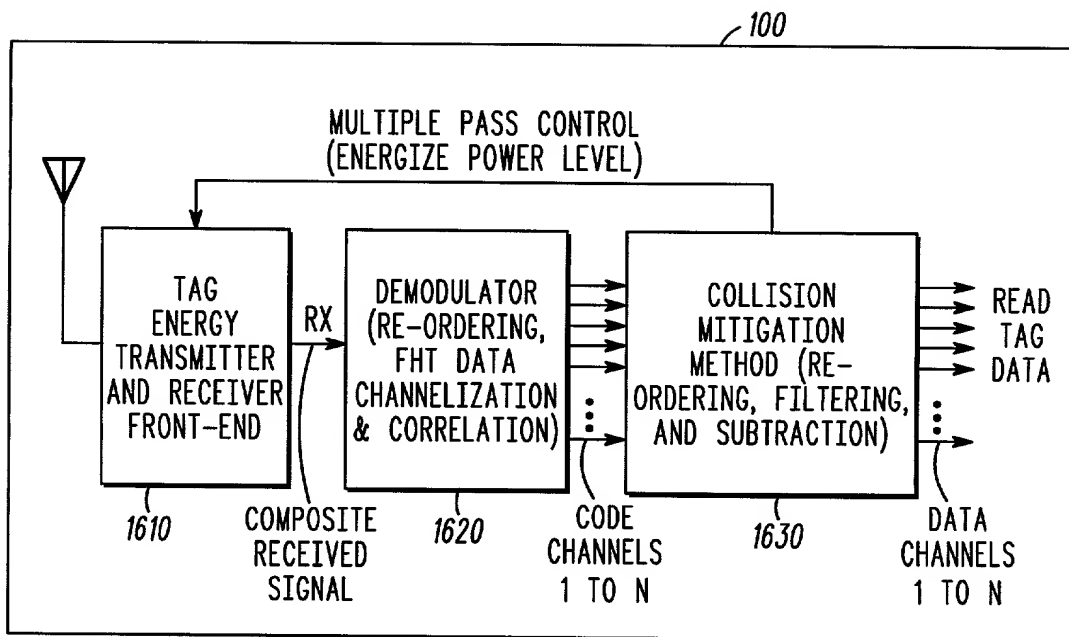
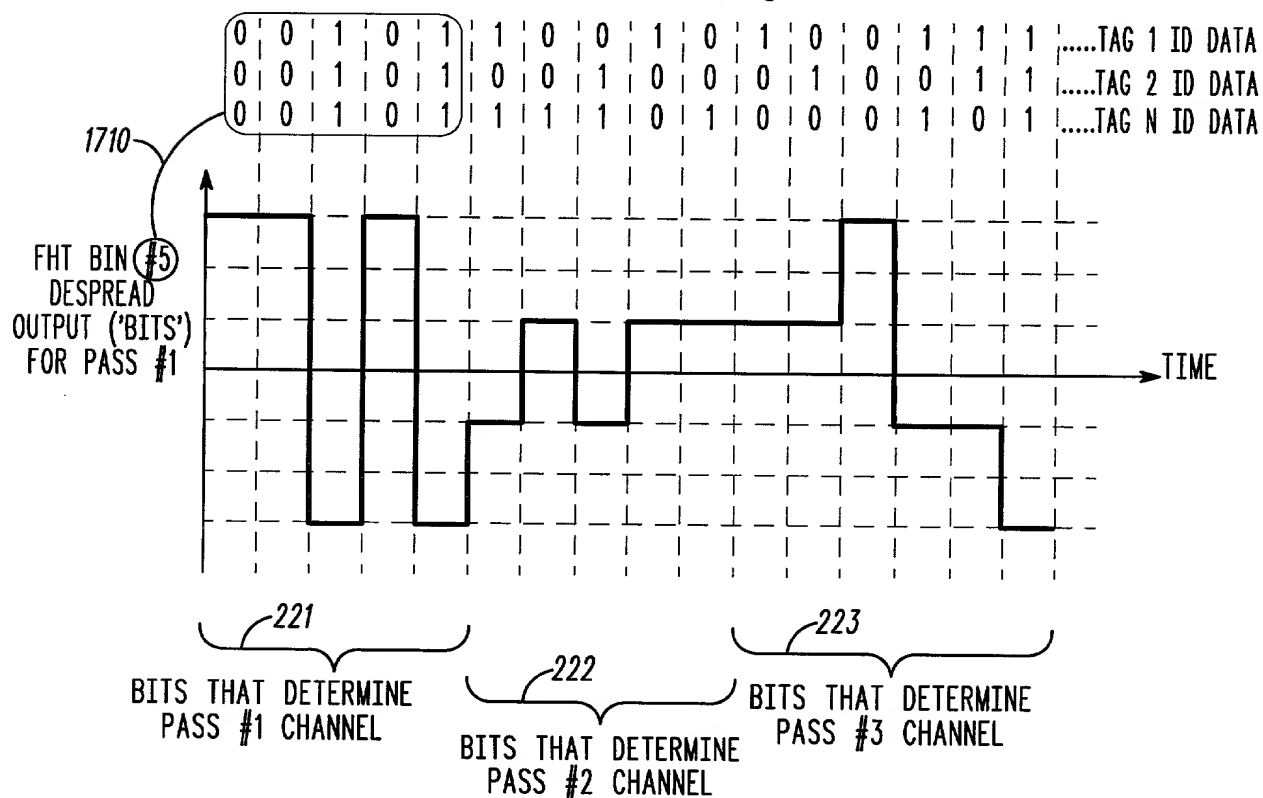


FIG. 16

FIG. 17



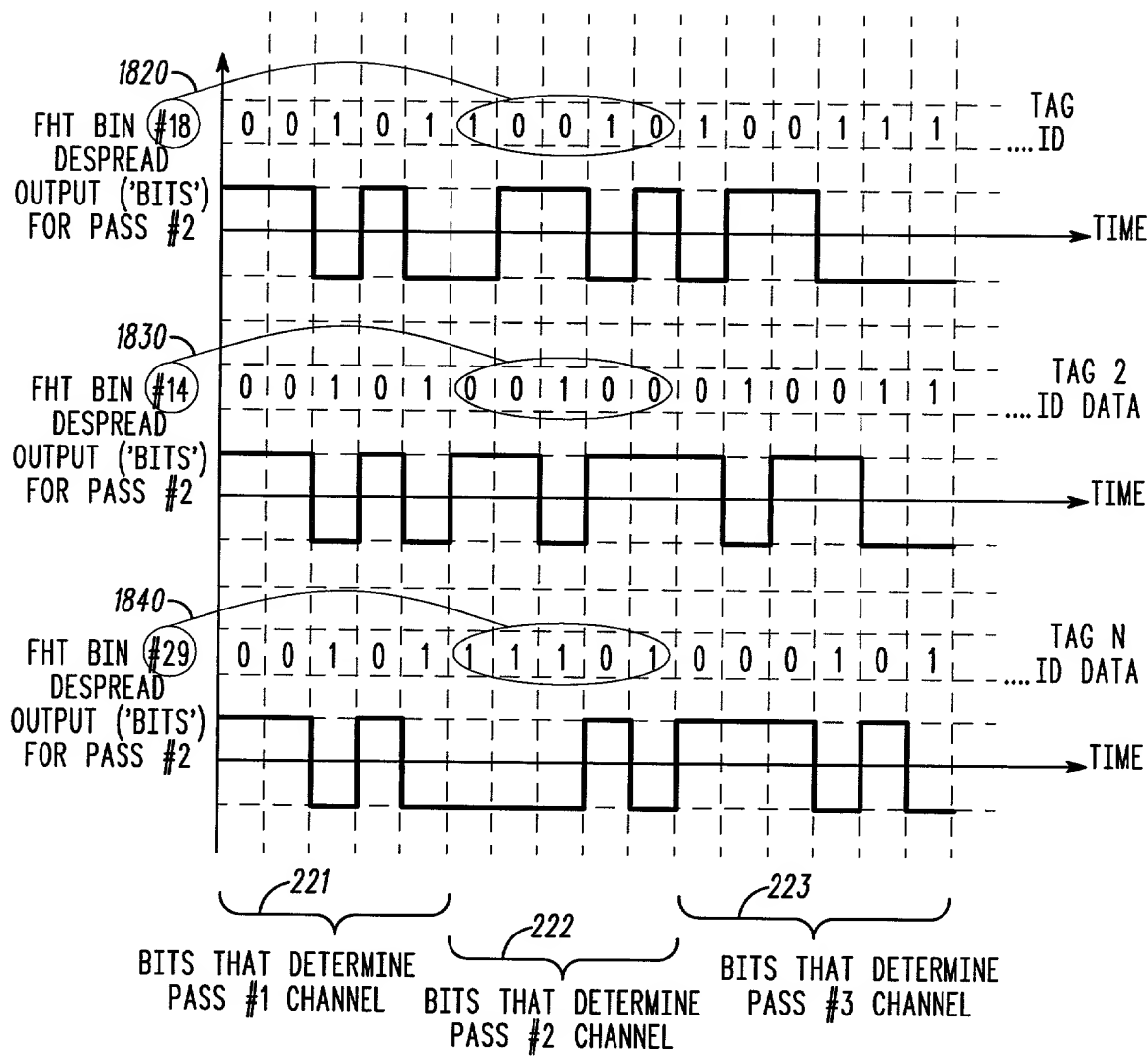


FIG. 18

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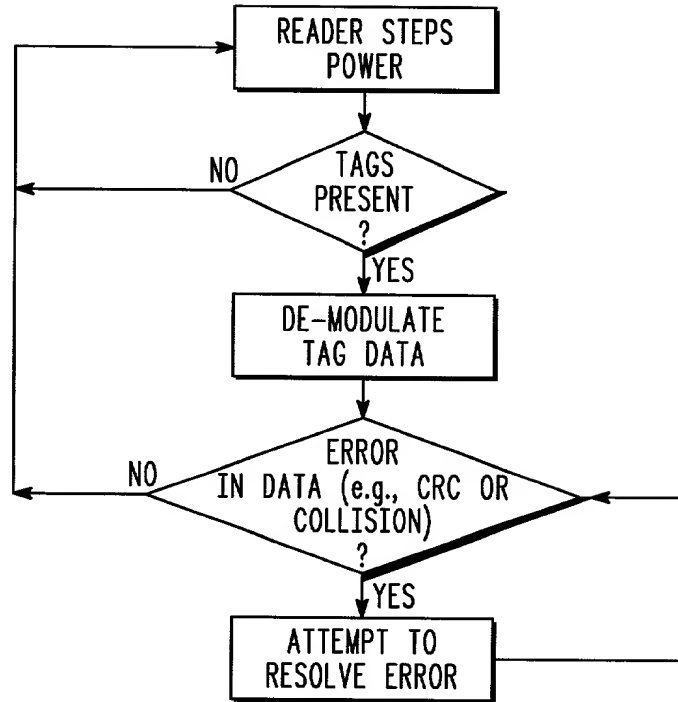


FIG. 19

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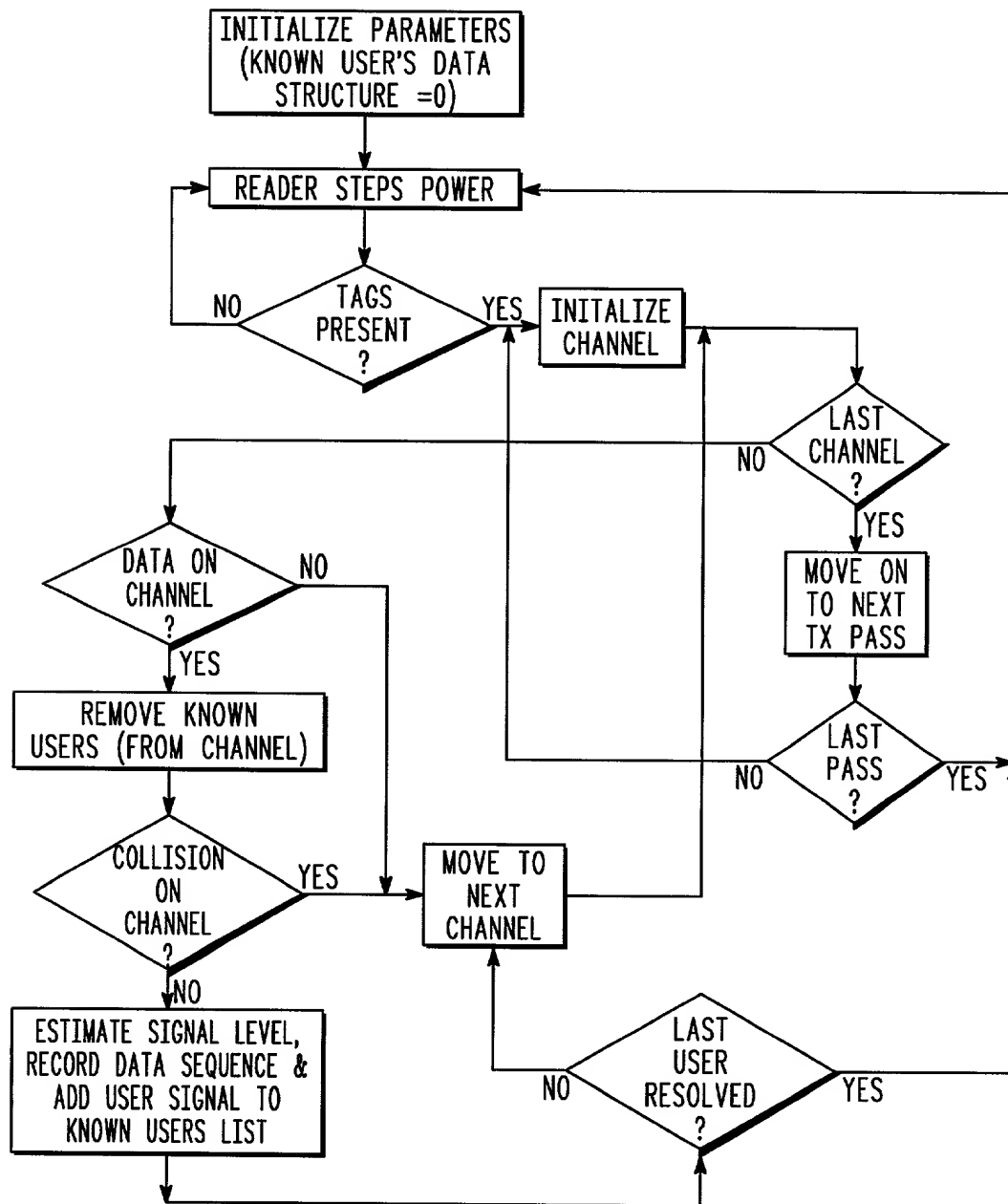


FIG. 20

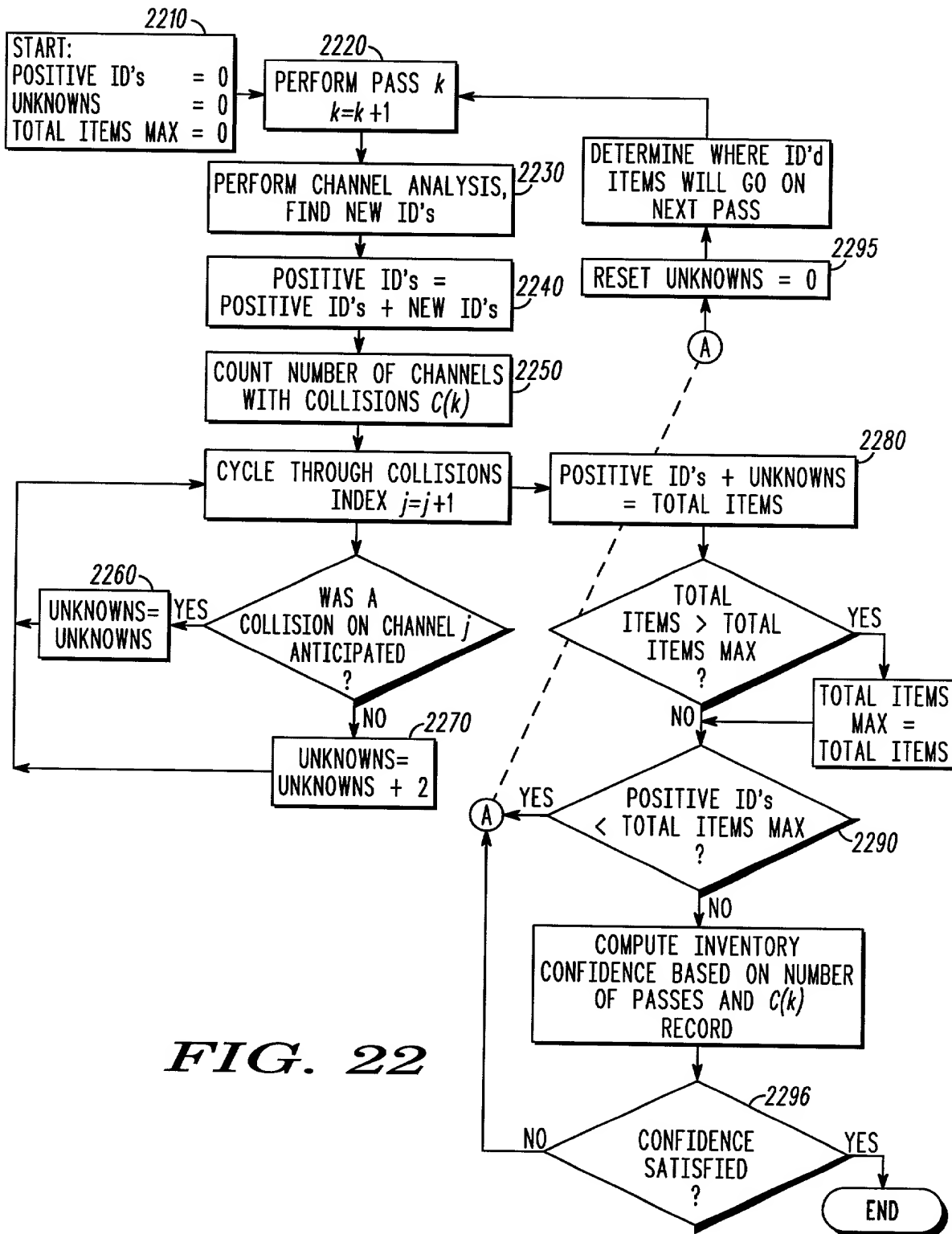
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CHANNEL NUMBER	#0	#1	#2	#3	#4	#5	#6	#7
PASS #1	①	2 6	4 8		③	⑦	⑤	
PASS #2	① 4 5	2 8			6 7			3
PASS #3	②			① 8	4 7		3	5 6
PASS #4			5	7	④	⑧	① 2 6	3
PASS #5	①		2	5 7	3	6 8	4	
PASS #6		4 8		5	① 3 6	2	7	
PASS #7		3 4 8		① 6		2 3		7
PASS #8		2 4	⑥			5 7 8	① 3	

LEGEND: CIRCLED ITEMS ARE NEWLY ID'd
SHADED ITEMS ARE PREVIOUSLY ID'd

FIG. 21

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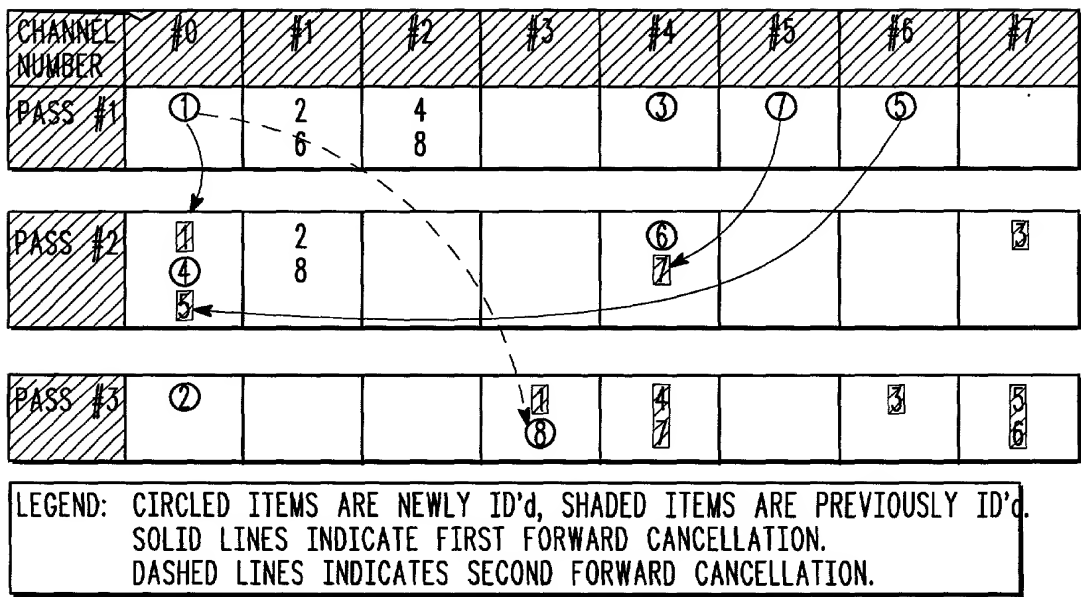


FIG. 23

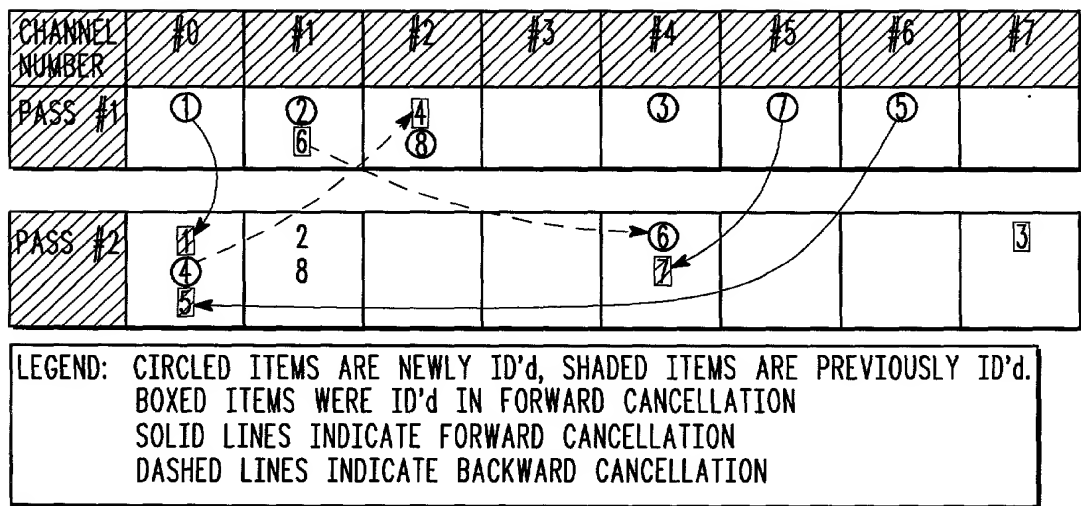


FIG. 24